

Attorney's Docket No. 1503.150np



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Bruce E. MARLIN

Appl. No.: 10/769,812

Group Art Unit: 2837

Filed: 02/03/04

Examiner: J. A. LUKS

For: COMPACT LOUDSPEAKER AND CONTROL SWITCH ASSEMBLY
AND METHOD FOR INSTALLING AND ADJUSTING A
LOUDSPEAKER IN A PARTITION

REASONS FOR PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

This is filed in response to the Final Office Action bearing a mail date of January 12th, 2007, and is being submitted as part of a Pre-Appeal Brief Request for Review.

Claims 1-14 and 20 are pending in the present application.

Independent claims 1 and 20 are discussed in detail in applicant's response of 15 November, 2006, reconsideration of which is solicited. To summarize, the claims ***do not read on*** any combination of the features shown in the references, and so claims 1-14 and 20 are allowable over the prior art.

Claims 1-14 and 20 were rejected as obvious and unpatentable in view of the combined teachings of U.S. Patent No. 6,457,547 to Novitschitsch, U.S. Patent No. 3,531,602 to Brown, U.S. Patent No. 6,164,408 to Lamm et al and U.S. Patent No. 5,875,252 to Lessage.

In response, the applicant respectfully points out that independent claim 1 positively recites structural limitations **not found in any possible combination of the cited references.**

Specifically, claim 1 recites a loudspeaker motor structure with the following structural limitations:

"a loudspeaker driver including a diaphragm suspended in a supporting flange structure proximate the driver proximal peripheral edge, said driver diaphragm having a proximal surface and a central axis; said driver further including a motor structure including a magnet and an axially aligned pole piece; and

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*a control switch connected to said loudspeaker and configured to control a signal passed to the loudspeaker driver; said switch being actuatable using an elongate switch shaft having a proximal end, **said shaft passing through said pole piece and said driver diaphragm whereby said shaft proximal end projects proximally beyond said driver diaphragm proximal surface**” (bold emphasis added.)*

As clearly recited in claim 1 (and claims 2-14, depending therefrom, directly or indirectly) the actuating control switch shaft passes **thru the center of the motor’s pole piece**, and this novel structural feature is nowhere taught or suggested in the prior art. This structural difference allows the applicant’s speaker to be installed and adjusted in a procedure that is significantly better than the procedure required by the prior art.

Independent method claim 20 is similarly distinguishable, since it recites a method of making the speaker of the present invention and specifically recites the following method steps:

*“(a) providing a loudspeaker driver having a diaphragm with a proximal surface bounded by a peripheral edge and a distal motor structure including an axially aligned pole piece having an aperture therethrough,
(b) inserting a switch carrying an elongate shaft having a free end through said pole piece aperture to project proximally beyond said diaphragm proximal surface...” (bold emphasis added.)*

As clearly recited in claim 20, the control switch shaft is inserted and passes thru the center of the motor’s pole piece, and this novel combination of method steps is nowhere taught or suggested in the prior art.

Turning specifically to the cited art, U.S. Patent No. 6,457,547 to Novitschitsch does not teach or suggest anything about a control switch that is actuatable from the front, and instead teaches a structure for a car speaker enclosure. No control feature is incorporated into any part of the motor structure and the speaker driver motor need not even include a pole piece or a control switch shaft. This is to be combined, we are told, with U.S. Patent No. 3,531,602 to Brown, which teaches a structure for a table radio cabinet having controls with shafts passing forward thru apertures in a foamed cellular plastic diaphragm, but again, no

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mention is made of motor structure, and so *there is no teaching that an axially aligned driver motor pole piece and diaphragm are configured to receive a control's shaft thru a pole piece.*

It is respectfully submitted that if these references were combined, the only possible result would be to mount the radio of Brown in Novitschitsch's enclosure, presumably in a motor vehicle, and so the advantages of the compact structure and easy method of the present invention would not be found. Brown and Novitschitsch are not really combinable to arrive at the structure of claim 1, absent hindsight and the disclosure of this applicant's invention.

Claims 5 and 8-14 have been rejected under 35 USC 103(a) as being obvious and unpatentable in view of the combined teachings of U.S. Patent No. 6,457,547 to Novitschitsch, U.S. Patent No. 3,531,602 to Brown and U.S. Patent No. 6,164,408 to Lamm et al.

In response, the applicant respectfully points out that claims 5 and 8-14 depend directly or indirectly from independent claim 1 and positively recite structural limitations not found in any possible combination of the cited references.

As noted above, claim 1 recites a loudspeaker motor structure with the structural limitations:

"a loudspeaker driver including a diaphragm suspended in a supporting flange structure proximate the driver proximal peripheral edge, said driver diaphragm having a proximal surface and a central axis; said driver further including a motor structure including a magnet and an axially aligned pole piece; and a control switch connected to said loudspeaker and configured to control a signal passed to the loudspeaker driver; said switch being actuable using an elongate switch shaft having a proximal end, said shaft passing through said pole piece and said driver diaphragm whereby said shaft proximal end projects proximally beyond said driver diaphragm proximal surface" (bold emphasis added.)

As clearly recited in claim 1 (and claims 5 and 8-14, depending therefrom) the actuating control switch shaft passes thru the center of the motor's pole piece, and this novel structural feature is nowhere taught or suggested in the prior art.

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Turning specifically to the cited art, U.S. Patent No. 6,164,408 to Lamm et al discloses a driver motor or exciter 14 *that may not include a pole piece, but if it does, there are no user operable controls passing thru any driver pole piece.* Instead, it appears that the structure and method taught in Lamm et al is intended to be mounted in a plenum above any ceiling or other partition, and so is not intended to be adjusted by a user when facing the diaphragm, after mounting the loudspeaker. This is to be combined, we are told, with U.S. Patent No. 6,457,547 to Novitschitsch which does not teach or suggest anything about a control switch that is actuable from the front, and instead teaches a structure for a car speaker enclosure. No control feature is incorporated into any part of the motor structure and the speaker driver motor need not even include a pole piece or a control switch shaft.

Combining some hybrid or composite taken from Lamm et al and Novitschitsch, we are asked to add elements gleaned from U.S. Patent No. 3,531,602 to Brown, which, as noted above, teaches a structure for a table radio cabinet having controls with shafts passing forward thru apertures in a foamed cellular plastic diaphragm, but again, no mention is made of motor structure, and so there is no teaching that an axially aligned driver motor pole piece and diaphragm are configured to receive a control's shaft thru a pole piece.

It is respectfully submitted that if these references *were* combined, the only possible result would be to mount the radio of Brown in Novitschitsch's enclosure, presumably in a building plenum or a motor vehicle, and so the advantages of the compact structure and easy method of the present invention would still not be found. There is no suggestion to make such a combination and Lamm, Brown and Novitschitsch are not really combinable to arrive at the structure of this applicant's claims, absent hindsight and the disclosure of this applicant's invention, and even then, the combination is missing structural elements that are positively recited in the claims.

For claims 6 and 7 (also depending directly and indirectly from claim 1), U.S. Patent No. 5,875,252 to Lessage discloses a loudspeaker driver motor for use, apparently, in a horn-loaded tweeter with a particular kind of phase plug 16 that is apparently held in place by a bolt 18 passing thru a pole piece in a way that permanently clamps the center of a diaphragm 4. No control feature is incorporated into any part of the Lessage's motor structure and the speaker driver motor does not include a control or a switch shaft. Combining some hybrid or

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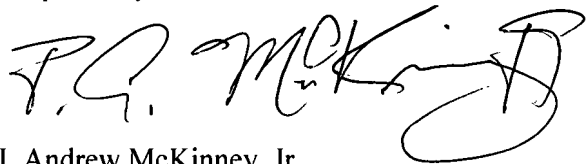
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composite taken from Lessage et al and Novitschitsch, we are asked to add elements gleaned from U.S. Patent No. 3,531,602 to Brown, which, as noted above, teaches a structure for a table radio cabinet having controls with shafts passing forward thru apertures in a foamed cellular plastic diaphragm, but again, no mention is made of motor structure, and so there is no teaching that an axially aligned driver motor pole piece and diaphragm are configured to receive a control's shaft thru a pole piece. It is respectfully submitted that if these references were combined, the only possible result would be to mount the radio of Brown in Novitschitsch's enclosure, presumably in a tweeter's horn throat, and so the advantages of the compact structure and easy method of the present invention would still not be found.

Lessage, Brown and Novitschitsch are not really combinable to arrive at the structure of this applicant's claims, absent hindsight and the disclosure of this applicant's invention, and even then, the combination is missing structural elements that are positively recited in the claims.

As noted above, the claims *do not read on* any combination of the features shown in the references, and so are allowable over the prior art. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested. Should the Examiner have any questions, he is requested to contact the undersigned.

Respectfully submitted,



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Doc Code: AP.PRE.REQ

PTO/SB/33 (07-05)

Approved for use through xx/xx/200x. OMB 0651-00xx

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Signature _____

Typed or printed name _____

Application Number

10/769,812

Filed

02/03/2004

First Named Inventor

BRUCE E. MARLIN

Art Unit

2837

Examiner

JEREMY A. LUKS

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)☒ attorney or agent of record.
Registration number 34,672☐ attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 _____

Signature

J. ANDREW MCKINNEY, JR.

Typed or printed name

703-415-1508

Telephone number

APRIL 11, 2007

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of 1 forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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